

# PATENT COOPERATION TREATY

## PCT

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### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC489GQ		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/EP2004/003105		International filing date (day/month/year) 24.03.2004	Priority date (day/month/year) 27.03.2003	
International Patent Classification (IPC) or national classification and IPC F02D11/10, B60K26/02, B60K41/04				
Applicant FIAT AUTO S.P.A. et al				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  22.10.2004		Date of completion of this report  27.06.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer  Libeaut, L  Telephone No. +31 70 340-2610		



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PCT/EP2004/003105

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-8 as originally filed

**Drawings, Sheets**

1/4-4/4 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Independent Claim 1**

1. The document D1 (WO 01/02210 A) is regarded as being the closest prior art to the subject-matter of claim 1, and shows a propulsion control system for a motor vehicle as disclosed in the preamble of claim 1 where the instantaneous traction force (power  $P_T$ ) to be applied to the driving wheels is determined from the (detected) angular position of an accelerator pedal.
2. The subject-matter of claim 1 differs from D1 in that
  - (a) the accelerator pedal is associated with a sensor operable to supply an electrical signal indicating the force applied to the accelerator by the driver and the instantaneous traction force is established according to this signal; and
  - (b) an actuator device is operable to modify the position of the accelerator, and is controlled in such a way that it tends to place the accelerator in a position corresponding to the instantaneous value of the speed of the motor vehicle.
3. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
4. The problem to be solved by the present invention may be regarded as increasing the stability of control for the driver and his driving pleasure by providing a dual force-position command of the traction force developed by the wheels on the ground.
5. Document D2 (GB 2 114 717 A) discloses a propulsion control system for a motor vehicle in which the accelerator pedal is of the "active" type (i.e. point 2.(b)). The accelerator is set in an optimal position corresponding to maximum fuel economy which is derived from the vehicle operating conditions, i.e. vehicle speed, engine speed, gear ratio, etc.... The counter-force applied to the accelerator is therefore a function of the difference between the actual pedal position and the optimal one, having the effect that the pedal is offering more resistance when the driver wants to overcome the optimal position. D2 does not include a sensor indicating the force applied by the driver to the pedal, but only the angular position of the pedal is measured. Although there is necessarily a link between the force exerted on the pedal and its position, D2 does not disclose, nor render it obvious, to have a sensor for measuring the force applied by the driver on the pedal and to set

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(SEPARATE SHEET)**

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accordingly a target traction force to be developed by the wheels on the ground. There is therefore no reason for the skill-person to modify the system of D1 by the teaching of D2, and, even so, replacing the "passive" pedal of D1 by the "active" pedal of D2 would not lead to the teaching of claim 1. None of the other cited documents would lead to such a teaching.

6. The subject-matter of claim 1 is therefore considered as involving an inventive step (Article 33(3) PCT).

**Dependent claims 2 to 9**

7. Claims 2 to 9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.